APPENDIX

Glossary of Technical Terms Relevant to the Testing Issue

The following terms occur frequently in the discussion of the testing issue, with specific reference to the purported job-relatedness of Albemarle's tests, and in the guidelines and authorities cited in that discussion. These terms are defined or described according to leading texts in the psychological testing field, as indicated.

1. *Validity.*

"Undoubtedly the most important question to be asked about any test concerns its validity, i.e., the degree to which the test actually measures what it purports to measure." A. Anastasi, *Psychological Testing,* London: MacMillan (3rd ed. 1968), p. 28.

"The validity of a test concerns *what* the test measures and *how well* it does so. *Id.,* p. 99.

"Validity refers to the degree to which a test correlates with a relevant measure of criterion of job performance. Unless those people who score relatively high on a test are also likely to perform better on the job, a test lacks validity for that purpose and is useless for selecting personnel for the job in question." J. Kirkpatrick et al., *Testing and Fair Employment,* New York: New York University Press (1968), p. 6.

2. *Validation.*

"[T]he point of research is to determine whether an appreciable relationship exists between scores on the predictor variable and some subsequent measure of job performance. . . .

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"Validation asks two fundamental questions. The first asks whether a relationship exists at all. If so, the second question is whether the relationship is strong enough to be useful." R. M. Guion, *Personnel Testing,* New York: McGraw-Hill (1965), p. 131.

3. *Criterion.*

"An index of occupational success used in connection with the validation of tests is termed the criterion." E. E. Ghiselli, *The Validity of Occupational Aptitude Tests,* New York: John Wiley (1966), p. 22.

"Prediction is based on a correspondence between one variable, the predictor, and another variable, the job behavior. That which is to be predicted is called the criterion." Guion, *supra,* p. 90.

"It is important that the criterion possess a high degree of validity. A test that can predict quality of work will seem to be a poor test if it is judged by a criterion that does not fairly indicate quality of work. The criterion (or set of criteria) should cover all important aspects of the job." L. J. Cronbach, *Essentials of Psychological Testing,* New York: Harper & Row (1970), p. 413.

4. *Criterion-related validation.*

"Criterion-related validity indicates the effectiveness of a test in predicting an individual's behavior in specified situations. For this purpose, performance on the test is checked against a *criterion,* i.e., a direct and independent measure of that which the test is designed to predict." Anastasi, *supra,* p. 105.

"Criterion-related validity can be best characterized as the practical validity of a test in a specified situation." *Id.* at 111.

5. *Concurrent validation* (*cf.* predictive validation).

"The term prediction can be used in the broader sense, to refer to prediction from the test to any criterion situation, or in the more limited sense of prediction over a time interval. It is in the latter sense that it is used in the expression predictive validity. The information provided by predictive validity is most relevant to tests used in the selection and classification of personnel. . . .

"In a number of instances, concurrent validity is found merely as a substitute for predictive validity. It is frequently impracticable to extend validation procedures over the time required for predictive validity or to obtain a suitable preselection sample for testing purposes. As a compromise solution, therefore, tests are administered to a group on whom criterion data are already available. Thus, the test scores . . of employees [may be] compared with their current job success.

"For certain uses of psychological tests . . . concurrent validity is the most appropriate type and can be justified in its own right. The logical distinction between predictive and concurrent validity is based, not on time, but on the objectives of testing. Concurrent validity is relevant to tests employed for diagnosis of existing status, rather than prediction of future outcomes." Anastasi, *supra*, p. 105.

6. *Correlation and Correlation Coefficient.*

"Meaning of correlation. Essentially, a correlation coefficient (r) expresses the degree of correspondence, or *relationship*, between two sets of scores." Anastasi, *supra*, p. 72.

"A correlation coefficient is a statistical summary of the relation between two variables. It is the most common

way of reporting the answer to such questions as . . . : Does this test predict performance on the job?" Cronbach, *supra,* p. 128.

7. *Statistical significance.*

"When we say that a correlation is 'significant at the 1 percent (.01) level,' we mean the chances are no greater than one out of a hundred that the population correlation is zero. . . . Significance levels refer to the risk of error we are willing to take in drawing conclusions from our data. . . . Most phychological research applies at either the .01 or the .05 levels, although other significance levels may be employed for special reasons.

". . . Any correlation below that value [.05] simply leaves unanswered the question of whether the two variables are correlated in the population from which the sample was drawn." Anastasi, *supra,* p. 76.

8. *Job analysis.*

"Job analysis sets up hypotheses stating which abilities and habits contribute to success on the job. No machine-like procedure of checking off one by one all possible job elements has ever been found successful. Instead, the psychologist studies the task with whatever insight and psychological knowledge he can muster. Job analysis is an art." Cronbach, *supra,* p. 407.